

IN THE CLAIMS:

1-9. (Cancelled)

10. (Currently Amended) An RF passive circuit comprising:

a semiconductor substrate;

a via-hole which is formed by applying a metal film on an inside wall of a hole provided through the semiconductor substrate;

a dielectric layer which is formed on a main surface of the semiconductor substrate so as to cover the metal film; and

an inductor which is a spirally-formed metal layer formed on the dielectric layer, which forms a static capacity where one part thereof faces the metal film of the via-hole, and the via-hole is formed at the center of the inductor.

11. (Currently Amended) An RF choke used in at least one of a matching circuit and a bias feeding circuit, both circuits being included in an RF amplifier, the RF choke comprising:

a semiconductor substrate where at least one of the matching circuit and the bias feeding circuit is incorporated;

a via-hole which is formed by applying a metal film on an inside wall of a hole provided through the semiconductor substrate;

a dielectric layer which is formed on a main surface of the semiconductor substrate so as to cover the metal film; and

an inductor which is a spirally-formed metal layer formed on the dielectric layer, which forms a static capacity where one part thereof faces the metal film of the via-hole, and the via-hole is formed at the center of the spirally-formed metal layer.

12. - 26. (Cancelled)

27. (Previously Presented) The RF passive circuit of Claim 10 wherein the inductor is connected to an input matching parallel capacitor having a first terminal on one side of the dielectric layer and a second terminal on the other side of the dielectric layer.

28. (Previously Presented) The RF passive circuit of Claim 27 herein the first and second terminals contain gold.

29. (Previously Presented) The RF passive circuit of Claim 28 wherein the dielectric layer has a permittivity of at least 100.

30. (Previously Presented) The RF passive circuit of Claim 28 wherein the inductor contains gold.

31. (New) A high frequency RF circuit, comprising:

an RF amplifier having a matching circuit and a bias feeding circuit with an RF choke in at least one of the matching circuit and the bias feeding circuit, the RF choke including,

a semiconductor substrate where at least one of the matching circuit and the bias feeding circuit is incorporated;

a via-hole which is formed by applying a metal film on an inside wall of a hole provided through the semiconductor substrate;

a dielectric layer which is formed on a main surface of the semiconductor substrate so as to cover the metal film; and

an inductor which is a spirally-formed metal layer formed on the dielectric layer, which forms a static capacity where one part thereof faces the metal film of the via-hole, and the via-hole is aligned with and formed concentric with the center of the spirally-formed metal layer.

32. (New) The high frequency RF circuit of Claim 31 including an MIM capacitor forming an input matching capacitor aligned with the center of the spirally-formed metal layer and between the inductor and the via-hole.